

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A power supply control device for a mobile robot system with a travel mechanism and a battery, comprising:
 - a charging/discharging circuit electrically controlling charge and discharge of the battery;
 - a control circuit checking remaining power in the battery, when the control circuit determines that the remaining power is insufficient, prohibiting an operation of the travel mechanism, issuing an alarm indicating an insufficient remaining power and instructing the charging/discharging circuit to charge the battery, and when the control circuit determines that the remaining power is sufficient, permitting the operation of the travel mechanism; and
 - a computer executing a program controlling a series of robot system operations, and on receipt of the alarm from the control circuit, issuing a charge request message to a user.
2. (original) A power supply control device for a mobile robot system with a drive mechanism and a battery, comprising:
 - a charging/discharging circuit with a current path that branches current from a power supply adaptor to the battery and to the drive mechanism, supplying current to the drive mechanism from the power supply adaptor while charging the battery with current supplied from the power supply adaptor; and
 - a control circuit instructing the charging/discharging circuit to charge the battery, and permitting an operation of the drive mechanism during charge.
3. (original) A power supply control device for a mobile robot system with a battery and a control logic unit, comprising:
 - a charging/discharging circuit with a current path that branches current from a power supply adaptor to the battery and to the logic unit, charging the battery with current supplied from the power supply adaptor when the logic unit is not operating, and supplying current to the logic unit from the power supply adaptor while charging the battery with current supplied from the power supply adaptor when the logic unit is operating; and
 - a control circuit instructing the charging/discharging circuit to charge the battery.

4. (original) A power supply control device for a mobile robot system with a drive mechanism and a battery, comprising:

a computer executing a program controlling a series of robot system operations; and
a switch detecting whether the computer is driven, and when the computer is not driven, automatically cutting off power supply to the drive mechanism from the battery.

5. (original) A power supply control method for a mobile robot system with a travel mechanism and a battery, comprising:

checking remaining power in the battery;
prohibiting an operation of the travel mechanism and issuing a charge request message to a user when the checking determines that the remaining power is insufficient, and charging the battery when the user turns a power supply adaptor on; and
permitting the operation of the travel mechanism when the checking determines that the remaining power is sufficient.

6. (original) A power supply control method for a mobile robot system with a drive mechanism and a battery, comprising

supplying current to the drive mechanism from a power supply adaptor while charging the battery with current supplied from the power supply adaptor by using a current path that branches current from the power supply adaptor to the battery and to the drive mechanism.

7. (original) A power supply control method for a mobile robot system with a battery and a control logic unit, comprising

charging the battery with current supplied from a power supply adaptor by using a current path that branches current from the power supply adaptor to the battery and to the logic unit when the logic unit is not operating, and supplying current to the logic unit from the power supply adaptor while charging the battery with current supplied from the power supply adaptor by using the current path when the logic unit is operating.

8. (original) A power supply control method for a mobile robot system with a drive mechanism and a battery, comprising:

detecting whether a computer that executes a program controlling a series of robot system operations is driven;

automatically cutting off power supply to the drive mechanism from the battery when the computer is not driven.

9. (original) A power supply control device for a mobile robot system with a travel mechanism and a battery, comprising:

a charging/discharging circuit means for electrically controlling charge and discharge of the battery;

a control means for checking remaining power in the battery, when the control means determines that the remaining power is insufficient, prohibiting an operation of the travel mechanism, issuing an alarm indicating an insufficient remaining power and instructing the charging/discharging circuit means to charge the battery, and when the control means determines that the remaining power is sufficient, permitting the operation of the travel mechanism; and

a computer means for executing a program controlling a series of robot system operations, and on receipt of the alarm from the control means, issuing a charge request message to a user.

10. (original) A power supply control device for a mobile robot system with a drive mechanism and a battery, comprising:

a charging/discharging circuit means with a current path that branches current from a power supply adaptor to the battery and to the drive mechanism, for supplying current to the drive mechanism from the power supply adaptor while charging the battery with current supplied from the power supply adaptor; and

a control means for instructing the charging/discharging circuit to charge the battery, and permitting an operation of the drive mechanism during charge.

11. (original) A power supply control device for a mobile robot system with a battery and a control logic unit, comprising:

a charging/discharging circuit means with a current path that branches current from a power supply adaptor to the battery and to the logic unit, for charging the battery with current supplied from the power supply adaptor when the logic unit is not operating, and supplying current to the logic unit from the power supply adaptor while charging the battery with current supplied from the power supply adaptor when the logic unit is operating; and

a control means for instructing the charging/discharging circuit to charge the battery.

12. (original) A power supply control device for a mobile robot a system with a drive mechanism and a battery, comprising:

a computer means for executing a program controlling a series of robot system operations; and

a switch means for detecting whether the computer is driven, and when the computer is not driven, automatically cutting off power supply to the drive mechanism from the battery.